SASKATCHEWAN CANCER FOUNDATION

Annual Report 1988-89

Cover Photo: The new Saskatoon Cancer Clinic, which was officially opened in September 1988, overlooks the South Saskatchewan River and the Meewasin Valley Trail on the University of Saskatchewan Campus.

Annual Report

of the

SASKATCHEWAN

CANCER

FOUNDATION

April 1, 1988 to March 31, 1989

SASKATCHEWAN CANCER FOUNDATION
Suite 400, 2631 - 28th Avenue
Regina, Saskatchewan
S4S 6X3

Allan Blair Memorial Clinic
4101 Dewdney Avenue
Regina, Saskatchewan
S4T 7T1

Saskatoon Cancer Clinic
20 Campus Drive
Saskatoon, Saskatchewan
S7N 0X0

90-03484/

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Letter of Transmittal

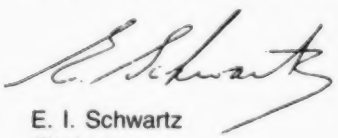
The Honourable George McLeod
Minister of Health
Province of Saskatchewan
Legislative Building
Regina, Saskatchewan
S4S 0B3

Dear Mr. McLeod:

As Chairman of the Saskatchewan Cancer Foundation's Board of Directors, I have the honour to submit herewith the report of the activities of the Foundation for the fiscal year ending March 31, 1989.

The continued support of you and your colleagues has assisted the Province's cancer program to keep pace with the growing demand for the services of the Cancer Foundation. We look forward to another year of progress in delivering care to patients, and in cancer research.

Respectfully submitted,

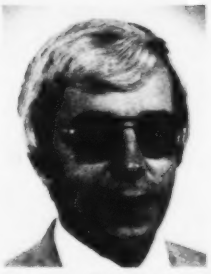


E. I. Schwartz
Chairman

Board of Directors

Mr. E. I. Schwartz
Chairman
Saskatoon

Mr. D. Babiuk
Regina



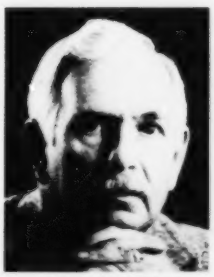
Dr. J. L. Blackburn
Saskatoon

Mrs. D. Cowie
Alida

Mr. J. Craig
North Battleford

Dr. I. E. Daunt
Yorkton

Mrs. E. Green
Melfort



Dr. W. D. MacRae
Regina

Mr. G. F. McCallum
Regina

Dr. I. M. McDonald
Saskatoon

Mrs. J. Turko
Swift Current

Cancer Control Program

The Saskatchewan Cancer Foundation is responsible for the development and operation of the Saskatchewan Cancer Program. The Foundation's administrative staff have responsibility for the implementation of policies and for the ongoing operation of the program.

The Foundation's two cancer clinics — the Allan Blair Memorial Clinic in Regina and the Saskatoon Cancer Clinic — provide diagnostic services, radiotherapy and chemotherapy treatment and follow-up services. They also serve as centres for the co-ordination of a multi-disciplinary approach to all aspects of care and treatment for cancer patients. Clinic staff work closely with the patient's family physician, consulting physician and surgeon, and other persons not directly employed by the Foundation to ensure the provision of high quality treatment and follow-up care.

Objectives

The objectives of the Saskatchewan Cancer Foundation are:

— the operation of cancer clinics for the examination, diagnosis and treatment of cancer patients.

— the education of the public in the importance of the early diagnosis, prevention and treatment of cancer.

— the training of technical personnel to assist in the examination, diagnosis, treatment and study of cancer and the provision of facilities for undergraduate and post-graduate study relating to cancer.

— the conduct of and participation in research projects in the diagnosis, prevention and treatment of cancer.

— the maintenance and operation of hostels in connection with the clinics.

Cancer Control Program

Nature and Scope of Services

The program offered by the Saskatchewan Cancer Foundation incorporates prevention, detection, diagnosis, treatment and follow-up of patients with malignant or premalignant disease. As a part of this comprehensive program, the Foundation is involved in teaching and research which is complementary to the service activities.

Since only patients referred by doctors are admitted to the Cancer Control Program, the responsibility for suspecting cancer and facilitating its detection at the earliest possible times rests with the family doctor. When the family physician suspects the presence of cancer, and has completed the investigations, a diagnosis should be arrived at and an evaluation made as to the extent of the disease and the treatment required as soon as possible. To facilitate this process the patient should be referred to the cancer clinic or appropriate specialists, whichever is most suitable. In all cases, the patient must be registered with the program within 14 days of making the diagnosis of cancer.

When a malignant condition is discovered, the clinic medical staff, the patient's physician, and consultant specialists plan and carry out a treatment program. If surgery forms part of the treatment, the patient and physician may choose an appropriate qualified surgeon from a surgical roster maintained by the Foundation. If radiotherapy forms part of the treatment plan, it is administered by radiation oncologists on the staff of the clinics. Chemotherapy, the treatment of cancer through the administration of chemical agents, is carried out by clinic medical staff and by other physicians in consultation with clinic staff.

Regular follow-up examination of patients treated for cancer is a vital procedure in detecting recurrent disease and for assessing the effectiveness of treatments. The Saskatchewan Cancer Foundation maintains a comprehensive follow-up activity with all patients receiving regularly scheduled examinations after treatment by either personnel of the clinics, consultant specialists or their family physician.

The staff of each clinic, in co-operation with the patient's family physician and consultant specialists, attempt during treatment and follow-up to prepare the patient both physically and psychologically for the future. Those who must be fitted with prosthetics are given instructions on how to adapt to them, while patients with certain disabilities are cared for at the Wascana Hospital in Regina or the rehabilitation unit of the University Hospital in Saskatoon. Patients and their families often go through successive periods of stress and readjustment when faced with problems created by a diagnosis of cancer. Social workers at each clinic are available to meet the social and emotional needs of the cancer patients and their families.

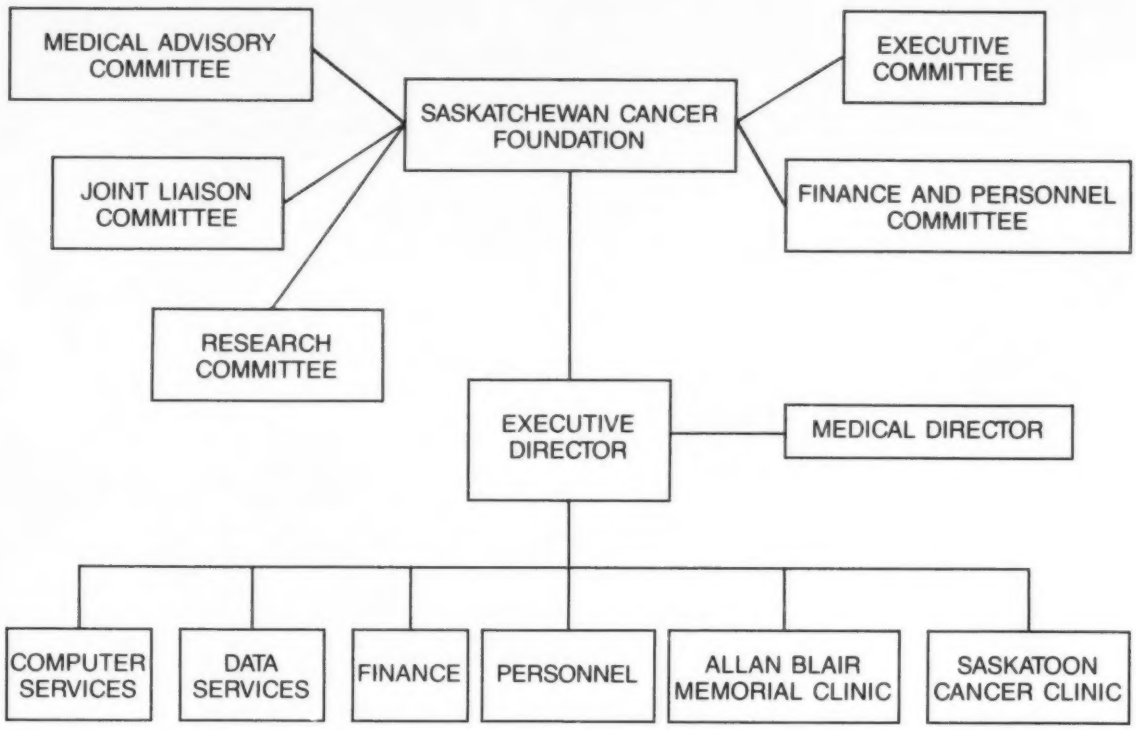
Eligibility and Benefits

To be eligible for benefits under the Cancer Control Program, a patient must be a resident of the province for three months and must be formally admitted to the program by his/her doctor. For landed immigrants and some special residents returning to Canada, this period is reduced to one day.

There is no charge to eligible patients for diagnostic and treatment services received at the cancer clinics. In addition, the Foundation pays for authorized medical and surgical services provided by physicians in private practice, in-hospital drugs, and certain out-patient drugs used in the active treatment of cancer.

The Foundation office or the cancer clinics can provide details on policies governing admission to the program and payment of services, including service outside the province and outside of Canada.

Organization



Committees

Executive Committee

Mr. E. I. Schwartz, Chairman
Dr. J. L. Blackburn
Mr. G. F. McCallum
Dr. I. M. McDonald
Mrs. J. R. Turko

The Executive Committee of the Board considers urgent business of the Foundation which may arise between regular meetings of the Board of Directors.

Finance and Personnel Committee

Dr. J. L. Blackburn, Chairman
Mrs. D. Cowie
Mr. J. Craig
Mrs. E. Green
Dr. W. D. MacRae
Mr. E. I. Schwartz (ex officio)

The Finance and Personnel Committee makes recommendations to the Board regarding the financial operation of the cancer program.

Organization

Medical Advisory Committee

Dr. D. F. White, Saskatoon; Chairman
Dr. A. V. Eustace, Wolseley
Dr. G. H. Ewing, Regina
Dr. W. N. Huber, Humboldt
Dr. S. K. Liem, Regina
Dr. A. W. Maksymiuk, Saskatoon
Dr. D. R. Popkin, Saskatoon
Dr. A. K. S. Teckchandani, North Battleford
Dr. K. R. Visvanathan, Estevan
Dr. H. Wass, Regina

The Medical Advisory Committee advises the Foundation on the provision of medical services and related matters.

Research Committee

Mr. P. H. Peters, Regina; Chairman
Dr. J. D. Chapman, Edmonton
Dr. D. V. Cormack, Calgary
Dr. G. H. Ewing, Regina
Dr. D. D. Johnson, Saskatoon
Dr. R. West, Regina
Dr. D. F. White, Saskatoon

The Research Committee advises the Foundation on the awarding of grants to support research projects initiated by Foundation staff, or by other researchers collaborating with Foundation staff.

Joint Liaison Committee

Mr. E. I. Schwartz
Mr. P. H. Peters
Mr. A. W. Wilson, Canadian Cancer Society
Mr. G. O. Thomas, Canadian Cancer Society

The Joint Liaison Committee addresses matters which are of mutual concern to the Saskatchewan Cancer Foundation and the Canadian Cancer Society, Saskatchewan Division.

Administration Staff

P. H. Peters	Executive Director
D. F. White	Medical Director
M. V. Brown	Administrative Assistant
V. J. Lusk	Director of Finance
W. G. Sharp	Associate Director of Finance
O. H. Pratt	Director of Personnel
D. L. Robson	Director of Data Services
D. L. Benson	Director of Computer Services

The administrative staff implement policy and have responsibility for the operation of the cancer program.

Reports

Executive Director

I am pleased to submit this report which highlights the activities of the Saskatchewan Cancer Foundation for the past year. 1988-89 was a busy year which saw our staff deal with a growing workload in addition to a number of special undertakings. One of these events was the relocation of the Saskatoon Cancer Clinic to its new site. The official opening of the centre included a ribbon cutting ceremony in which Her Honour Dr. Sylvia O. Fedoruk, Lieutenant Governor of Saskatchewan, participated. This was a major milestone in the Cancer Foundation's ten year history, and was the culmination of approximately six years of effort by staff, management and Board.

In October, we hosted the Annual Meeting of the Provincial Cancer Agencies in Saskatoon. At this meeting a definitive step was taken to establish a National Organization of Cancer Agencies through the development of a Memorandum of Understanding. The primary objective of this formalized structure focuses on our working together in various areas, including information exchange, manpower planning, and in addressing interprovincial and national issues.

On the recommendation of its Medical Advisory Committee, the Cancer Foundation approached the Minister of Health, expressing our interest in the development of a breast cancer screening program in the province. At the invitation of the Deputy Minister of Health, the Foundation was pleased to appoint Dr. David White and Diane Robson to the Deputy Minister's Task Force on Breast Cancer Screening Services, and we look forward to further developments in a program for the early detection of breast cancer.

The Cancer Foundation and the College of Medicine of the University of Saskatchewan reached agreement on the establishment of a jointly-funded cancer epidemiology unit. This unit will initiate research into the epidemiology of cancer in the province, coupled with the development of collaborative epidemiological studies with the professional staff of both agencies.

To deal more effectively with the demands of the ever changing environment of a developing cancer program, the Board and senior management of the Foundation participated in a strategic planning workshop led by Dr. Ronald Fisher from the University of Saskatchewan. This initial meeting saw the development of a draft mission statement, principles and goals for the Foundation. Subsequently, a strategic planning committee was established, which has responsibility for the development of a strategic plan for the Foundation. On a related topic, a vision of the future development of the cancer program in Saskatchewan was the focus of the Cancer Foundation's brief to the Premier's Commission on Directions in Health Care.

I want to express our appreciation to the Board, management and staff of the University Hospital and Pasqua Hospital, who serve as the "host hospitals" for the two cancer centres. These facilities play an important role in the provision of support services to our patients and to the respective clinics.

The cancer program continues to experience many changes; however, a remaining constant is the dedication of our staff and volunteers. In part, this report is a public recognition of their commitment to the work.

Finally, I want to thank the Chairman and the Board of Directors for their support and direction during the past year.

P. H. Peters
Executive Director

Reports

Medical Director

The provision of service to patients with cancer is the central focus of the Saskatchewan Cancer Foundation. The extent of these services continues to expand in relationship to patient and societal expectations. The basic needs can be met by an adequate number of well-trained oncologists supported by the ancillary services of physicists, nurses, radiation therapy technologists, social workers, nutritionists, pharmacists, etc. Cancer care within the Foundation is the provision of radiation therapy and cancer chemotherapy, but as well, there is an important co-ordinating function for the Foundation to ensure the provision of early diagnosis, screening for cancer, and supportive care, including terminal care, that is necessary for cancer patients.

To maintain the necessary motivated personnel to provide this service requires a fulfillment of the educational and research aspirations of these personnel. It is the interaction of service, education and research that adds strength to each of these three elements.

The service program in the Foundation is being expanded to incorporate the concept of a more formalized program of "outreach". This will start as a pilot project which will involve family physicians and surgeons providing more sophisticated chemotherapy treatment to patients in their own communities.

The continuing process of standardization of treatment programs will make it easier to develop the outreach program through increased educational effort directed to physicians, nurses, pharmacists, and hospital administrators.

In the educational area, the Foundation continues to sponsor educational programs within the clinics — lymphomas, gastrointestinal malignancy and mammography are topics addressed in the last year. There is continued participation by professional staff in both Continuing Medical Education and Continuing Nursing Education; the Foundation clinics represent an important resource for these programs.

The presence of Foundation staff in leadership roles in co-operative clinical studies of both the North Central Cancer Treatment Group and National Cancer Institute of Canada is an important manifestation of commitment to clinical research, which is an important factor in both the current relevance of treatment and in quality assurance.

Recruitment for radiation, medical and pediatric oncologists is a continuing process in Saskatchewan as it is in other parts of Canada. Our inability to maintain a full staff complement in these disciplines has resulted in some aspects of the program development being delayed.

D. F. White
Medical Director

Allan Blair Memorial Clinic Report

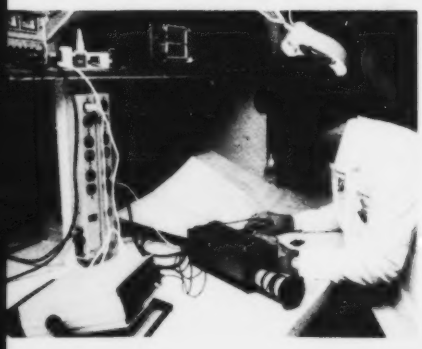
Medical Staff

Dr. M. S. Khan, Radiation Oncologist at the Allan Blair Memorial Clinic since 1986, was promoted to Head of the Radiotherapy Department.

Dr. B. H. Jo relocated from Nova Scotia to join the Clinic as a Radiation Oncologist.

Dr. M. A. Poon, Medical Oncologist at the Clinic since 1978, assumed the position of Head of the Medical Oncology Department.

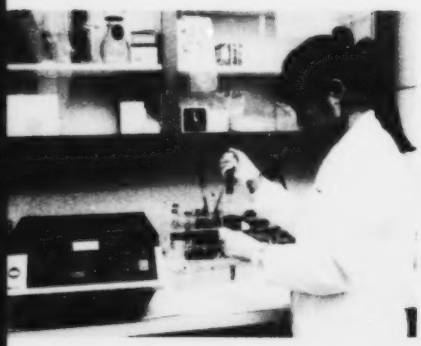
Dr. K. Soltys accepted a term position as Assistant Physician.



Dr. J. MacIntosh completed a one year appointment in August. Dr. MacIntosh, who retired from the Clinic in 1984, had returned to provide assistance during a period of manpower shortage.

Research

In 1988-89, the Saskatchewan cancer research program had 56 North Central Cancer Treatment Group (NCCTG) clinical trial participants, and 11 who participated in National Cancer Institute of Canada (NCIC) trials. The increasing number of patients who elect to participate affirms the acceptance of NCCTG and NCIC clinical trials. In addition, there were 184 NCCTG cancer control studies undertaken, and five pharmaceutical studies.



Dr. T. S. Goh assumed responsibility as principal investigator on the Children's Cancer Study Group. Reinstatement of membership in the project was near finalization and protocols were maintained.

The Clinic, in its desire to better evaluate the treatment provided, established a Quality Assurance Coordinator position in the Health Records Department to assist in analyzing the effectiveness of treatment modalities.

For reports on Foundation-supported research projects, see pages 34 to 36.

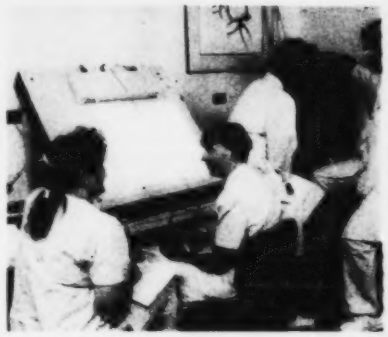
Education and Training

The Foundation's professional staff are dedicated to keeping attuned to new treatment methods and technologies. This is accomplished in many ways, including utilization of the Clinic Library, association with the University of Regina, and attendance at national and international conferences.

Clinic staff contributed to the continuing education of physicians and nurses in the province by participating in programs arranged by the Continuing Medical/Nursing Education programs of the College of Medicine, University of Saskatchewan.

Allan Blair Memorial Clinic Report

Two students graduated from the Radiation Therapy Technologist Training Program and, following graduation, were employed at the Clinic. The clinical and theoretical training were provided at the Clinic while the didactic training was provided at the Princess Margaret Hospital in Toronto. In the future, students will receive this out-of-province training in Winnipeg through the Manitoba Cancer Treatment and Research Foundation. In addition to the graduates, one student was enrolled in the second year and three students in the first year of the 26-month course.



Opportunities were provided for staff development through in-house presentations by Health Records, Physics, Computer Services, and Data Services staff, and by outside agencies such as the Canadian Cancer Society.

Technology

Patient convenience motivated the purchase of portable chemotherapy infusion pumps which allow continuous delivery of chemotherapy to an outpatient. Charitable donations made it possible to provide this service to patients.

Medical Physics staff maintained treatment equipment which is being utilized to full capacity. Major items include the Picker C9 cobalt unit, 4 MeV linear accelerator, 20 MeV linear accelerator, deep therapy x-ray unit and Siemens simulator.

Added to the Clinic workload of Medical Physics is the service provided to nuclear medicine in the three Regina hospitals. Staff were extensively involved in the selection and placement of new technological equipment for the nuclear medicine department which was established at the Regina General Hospital.

The addition of a computerized tracking system in Health Records for the purpose of managing chart flow has added to the efficiency of this function.

Support Services

Many patients and their families found it less traumatic to cope with the effects of cancer because of the counselling services provided by the Social Work Department. The Canadian Cancer Society, Saskatchewan Division, is commended for its financial support of the Personal Services Worker Program.

The Patient Lodge offers accommodation and recreational activities for patients from outside Regina who are undergoing treatment at the Clinic. Volunteer assistance in this program is vital to its functioning.

Allan Blair Memorial Clinic Report

Statistics

Patient Visits

	1985	1986	1987	1988
New Cases	1228	1365	1281	1231
Review Cases	13165	15194	15839	15250
Radiotherapy*		12848	13126	14060
Chemotherapy*			3088	2881

* A computer system was implemented in 1986 to collect basic information on radiotherapy treatments (cases, treatment visits and fields). A similar system for chemotherapy to collect information on the number of treatments and drugs administered in the clinic was implemented in 1987.

Number of Patients Treated by Radiation

	1985	1986	1987	1988
Linear Accelerator	431	672	871	879
Cobalt	503	157	14	42
X-ray	125	134	160	110
Interstitial/intracavitary	27	18	21	33
Gold Grains	3	1	1	0
Other (P32, I131)	3	18	10	5
Total	1092	1000	1077	1069

Patient Visits Outside the Clinic

	1985	1986	1987	1988
New Cases	1757	1685	1753	1909
Reviews Reported	17218	16498	15451	15150

The above cases are registered and followed by the cancer clinic through community physicians and are not normally seen in the clinic.

Allan Blair Memorial Clinic Report

Administration Staff

G. H. Ewing	Director
J. A. Grill	Business Manager
A. M. Sweet	Assistant to Business Manager

Physicians

G. H. Ewing	M.B., Ch.B., M.R.C.P. (Ed.), F.R.C.P.(C)
T. S. Goh	M.B., B.S., F.R.C.P.(C)
B. H. Jo	M.D., A.I.M., A.B.R.(T)
M. S. Khan	M.B., B.S., D.M.R.T., F.F.R.
S. K. Liem	M.D., D.A.B.R., F.R.C.P.(C)
M. A. Poon	M.B., F.R.C.P.(C)
S. Rayson	M.B., B.S., F.R.C.P.(C)
L. J. Rodrigue	M.D., F.R.C.S.(C), D.A.B.S.
K. M. Soltys	M.D.
H. G. Whiston	M.B., Ch.B., D.M.R.T., F.R.C.P.(C)

Consultants

Pathology

D. Dexter	M.R.C.Path., F.R.C.P.(C)
J. M. Vetters	M.D., F.R.C.P.(C), F.R.C.Path.

Physicists

P. A. Dickof	M.Sc., M.C.C.P.M.
H. W. Fielding	B.Sc., M.Sc., Ph.D.
G. M. Mawko	B.Sc., M.Sc.(A), Ph.D.
M. G. Schmid	B.Sc., M.Sc., M.C.C.P.M.
W. A. Ziegler	B.Sc., M.Sc., Ph.D.

Department Heads

M. A. Poon	Head of Medical Oncology
M. S. Khan	Head of Radiation Oncology
P. A. Dickof	Chief Medical Physicist
A. V. Curtis	Head Nurse
E. A. Dietrich	Director of Health Records
B. J. Uncles	Medical Social Worker
J. Dufay	Chief Technologist
S. L. Murray	Patient Lodge Manager

Saskatoon Cancer Clinic Report

Relocation

The relocation of the Saskatoon Cancer Clinic to its new facility in the summer of 1988 was, indeed, the highlight of the year. The team of planners, project workers and staff can be proud of this 8,500 square metre facility, which provides attractive, comfortable surroundings for our cancer patients.

Connected to University Hospital, the facility offers spacious areas for diagnosis and treatment. Radiation therapy and chemotherapy treatment are administered by professional staff who have access to the latest equipment, and support services are more efficiently delivered in custom designed space. The Cancer Research Unit provides world-class facilities for basic oncology research.

Medical Staff

The Clinic was successful in attracting to its professional staff two Radiation Oncologists — Dr. A. Agranovich from Vancouver and Dr. H. V. Vacchrajani from Birmingham, U.K.

Dr. D. McGowan, who served the centre as Head of Radiation Oncology since 1983, advised he will leave to assume a position at the Cross Cancer Institute in Edmonton.

Dr. N. Jha resigned in September, 1988 to accept a position at the Cross Cancer Institute.

Research

A major focus is the development and staffing of the new research facility which will provide new direction in oncology research, and the opportunity for professional interaction of clinicians and research scientists.

Continued membership in the North Central Cancer Treatment Group (NCCTG) and National Cancer Institute of Canada (NCIC) has resulted in an increased number of patients receiving clinical trials treatment, as reported by the princial investigator on page 12.

For information on Foundation-sponsored research projects, see pages 34 to 36.

Education and Training

Participation of physicians in the NCCTG and NCIC educational conferences provided opportunities for collaboration with colleagues in major medical centres. New treatment modalities were the focus of these educational events.

Saskatoon Cancer Clinic Report

The Children's Cancer Study Group (CCSG) meeting in St. Louis, Missouri was attended by medical staff of the Pediatrics Department. Participation in this project offers an opportunity to access the latest protocols in North America and determine those that can be administered in Saskatchewan.

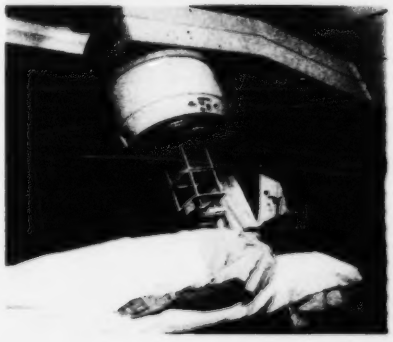
Nursing staff enhanced their skills through attendance at conferences of the Canadian Association of Nursing Oncology and the Oncology Nurses Congress of the United States.

Clinic staff, in cooperation with the University of Saskatchewan's Continuing Medical and Nursing Education, provided cancer care instruction to physicians and nurses.

Two students graduated from the Radiation Therapy Technologist Training Program in Saskatoon, and are employed by the Clinic. The clinical and theoretical training were provided at the Clinic while the didactic training was provided in Winnipeg through the Manitoba Cancer Treatment and Research Foundation. In addition to the graduates, one student was enrolled in the second year and two students in the first year of the 26-month course.

Technology

The purchases of portable continuous infusion chemotherapy pumps from donated funds allows patients who are candidates for this method of delivering chemotherapy drugs the convenience of receiving their treatment as outpatients.



The relocation to the new facility required extensive time and expertise to dismantle, move and reconstruct complex radiotherapy and computer equipment and install new equipment. This work was carried out by the staff of Physics Services, with minimal interruption to patient treatment.

Equipment maintained by Physics staff included a dual purpose x-ray unit, a 120kVp x-ray unit, an A.E.C.L. Theratron 80 cobalt unit, a Siemens 6 MeV linear accelerator, a Siemens 42 meV betatron and an A.E.C.L. simulator.

Support Services

The expansion of Pharmacy services in the new facility allows for improved care and service to patients. The establishment of a pharmacy residency in oncology was initiated — a first of its kind in Canada.

The Social Work Department assists patients and their families to cope with cancer, and offers advice on how to obtain the services they require. New patients registered in the cancer program are offered assistance based on the type of treatment they are receiving.

Saskatoon Cancer Clinic Report

The importance of diet in the treatment and prevention of cancer is the focus of the Nutrition Services Department, through the provision of nutritional care to patients, and public awareness programs.

The Cancer Patient Lodge accommodates patients from outlying areas who receive treatment at the Clinic.

The Canadian Cancer Society, Saskatchewan Division, plays an important role in providing services to our cancer patients — through assistance in financing the Personal Services Worker Program, the Cancer Patient Lodge, and public awareness programs.

Statistics

Patient Visits

	1985	1986	1987	1988
New Cases	1355	1519	1421	1325
Review Cases	12160	13482	14351	13391
Radiotherapy*		17106	15858	15360
Chemotherapy*			2890	2964

* A computer system was implemented in 1986 to collect basic information on radiotherapy treatments (cases, treatment visits and fields). A similar system for chemotherapy to collect information on the number of treatments and drugs administered in the clinic was implemented in 1987.

Number of Patients Treated by Radiation

	1985	1986	1987	1988
Betatron	136	140	138	87
Linear Accelerator	276	397	409	434
Cobalt	494	551	513	499
X-ray	59	27	42	58
Interstitial/intracavitary	25	19	8	55
Beta-ray		3		43
Gold Grains				9
Other (P32, I131)	28	22	16	39
Total	1018	1159	1126	1224

Patient Visits Outside the Clinic

	1985	1986	1987	1988
New Cases	1615	1583	1751	1964
Reviews Reported	19210	20423	18757	17184

The above cases are registered and followed by the cancer clinic through community physicians and are not normally seen in the clinic.

Saskatoon Cancer Clinic Report

Administration Staff

D. F. White	Director
O. Belovanoff	Business Manager
M. M. Wood	Assistant to Business Manager

Physicians

A. L. Agranovich	M.D., F.R.C.P.(C)
G. R. Armitage	M.D., F.R.C.P.(C)
I. M. MacLennan	M.B., Ch.B., D.A.B.R.(T)
D. G. McGowan	M.B., Ch.B., D.M.R.T., F.R.C.P.(C)
A. W. Maksymiuk	M.D., F.R.C.P.(C)
M. F. Mohamed	M.B.B.S., D.M.R.T., F.R.C.R.
A. Naidoo	M.B., Ch.B.
B. D. Norris	B.Sc., M.D., F.R.C.P.(C)
H. V. Vachhrajani	M.D., M.B.B.S., D.G.O., F.R.C.R.
D. F. White	M.D., F.R.C.P.(C)

(Part-time)

R. T. Card	M.D., F.R.C.P.(C)
H. I. Krespin	M.D., F.R.C.P. (C)
S. Padmanabh	M.B.B.S., D.C.P., F.R.C.P.(Ed.), F.R.C.P.(C)
D. R. Popkin	B.Sc., M.D., C.M., F.R.C.S.(C), F.A.C.O.G.
D. P. Sheridan	M.D., F.R.C.P.(C)
L. F. Skinnider	M.B., F.R.C.P.(C)

Consultants

Pathology

H. J. Block	F.R.C.P.(C)
H. E. Emson	F.R.C.P.(C)

Diagnostic Radiology

T. A. Kudel	M.D., F.R.C.P.(C)
D. K. Fraser	M.D., F.R.C.P.(C)
P. S. Tchang	M.D., F.R.C.P.(C)

Physicists

W. B. Reid	B.A., M.A., Ph.D., F.C.C.P.M.
A. D. Baillie	B.Sc., Ph.D., F.C.C.P.M.
R. H. Hummel	B.Sc., (EE), M.Sc., Ph.D., M.C.C.P.M.
J. R. Lapointe	B.Sc., M.Sc., Ph.D.

Department Heads

A. W. Maksymiuk	Head of Medical Oncology
D. G. McGowan	Head of Radiation Oncology
W. B. Reid	Chief Medical Physicist
S. G. Cianflone	Head Nurse
V. W. Runquist	Director of Health Records
A. E. Kaytor	Chief Technologist
E. A. Skinner	Medical Social Worker
J. R. Gravel	Dietitian
V. M. Klusa	Patient Lodge Manager

Statistical Tables

New Cancers by Site, Sex and Age Group — 1988

SITE	Sex	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	Total
Lip	M	0	0	0	0	0	0	0	0	0	2	5	10	8	8	15	7	4	5	64
	F	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	3	6
Oral Cavity	M	0	0	0	0	0	0	0	2	1	6	0	3	2	1	5	1	2	1	24
	F	0	0	0	0	1	0	1	0	1	2	1	3	1	1	3	2	3	4	23
Pharynx and	M	0	0	0	0	0	0	0	0	1	0	0	2	0	3	2	1	1	0	10
Nasopharynx	F	0	0	0	0	0	0	0	0	0	0	2	1	2	0	0	1	0	0	6
Oesophagus	M	0	0	0	0	0	0	0	0	0	0	0	7	3	6	3	4	0	3	26
	F	0	0	0	0	0	0	0	0	1	0	0	0	1	0	3	2	4	0	11
Stomach	M	0	0	0	0	0	0	0	0	0	2	1	4	7	15	11	6	11	13	70
	F	0	0	0	0	0	0	1	1	0	0	1	2	6	3	6	7	3	8	38
Small Intestine	M	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	3	0	0	7
	F	0	0	0	0	0	0	0	0	0	1	0	0	0	2	4	2	0	0	9
Colon	M	0	0	0	0	0	2	1	0	3	3	5	7	21	34	37	34	30	18	195
	F	0	0	0	0	0	0	0	3	2	5	6	9	24	22	30	22	20	21	164
Rectum	M	0	0	0	0	0	0	0	1	1	4	6	13	10	15	21	20	16	9	116
	F	0	0	0	0	0	0	1	1	0	4	2	4	11	13	15	16	6	9	82
Liver	M	0	0	0	0	0	0	0	0	1	1	0	0	2	7	5	4	5	5	30
	F	0	0	0	0	0	0	1	0	2	0	1	2	1	2	8	4	1	7	29
Pancreas	M	0	0	0	0	0	0	0	0	1	1	4	7	5	4	6	7	5	4	44
	F	0	0	0	0	0	0	0	0	0	0	3	3	9	6	10	8	7	9	55
Larnyx	M	0	0	0	0	0	0	0	0	1	1	2	10	8	10	3	1	2	2	40
	F	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	3
Lung	M	0	0	0	0	0	0	1	1	2	6	14	38	58	78	74	46	31	9	358
	F	0	0	0	0	0	0	2	2	6	11	16	9	22	27	19	22	6	4	146
Breast	M	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	1	4
	F	0	0	0	0	0	3	8	18	26	30	44	47	69	76	76	55	24	27	503
Prostate	M	0	0	0	0	0	0	0	0	0	0	3	21	49	75	85	99	79	51	462
Testis	M	1	0	0	0	1	0	4	1	2	1	0	0	0	0	1	1	0	0	12
Other Male Organs	M	0	0	0	0	0	0	2	0	0	1	0	0	0	2	3	0	3	0	11
Cervix (Invasive)	F	0	0	0	0	1	6	3	8	6	4	1	3	4	6	2	7	0	1	52
Uterus	F	0	0	0	0	0	0	1	2	2	6	9	19	13	9	12	10	8	9	100
Ovary	F	0	1	0	0	1	0	0	4	2	1	6	7	10	7	16	7	0	4	66
Other Female Organs	F	0	0	0	0	0	0	1	0	0	0	1	1	0	2	1	1	2	1	10
Other Urinary Organs	M	0	0	0	0	0	0	0	1	2	3	2	2	9	20	17	13	8	4	81
	F	0	0	0	0	0	0	1	1	0	0	1	3	4	8	5	12	7	1	43
Urinary Bladder	M	0	0	0	0	0	1	1	3	2	5	2	14	9	16	29	20	19	8	129
	F	0	0	0	0	0	0	0	1	0	1	5	8	5	9	2	10	4	6	51
Malignant Melanoma	M	0	0	0	1	1	0	4	3	4	2	4	4	1	6	4	3	4	3	44
(Skin)	F	0	0	0	1	3	8	7	6	1	4	2	3	5	5	2	4	5	1	57
Brain and	M	2	1	3	0	0	3	1	0	1	0	3	6	4	3	4	1	0	0	32
Nervous System	F	0	0	2	0	0	1	1	1	0	0	2	1	4	2	4	1	2	0	21
Thyroid	M	0	0	0	0	0	0	2	1	0	3	0	1	1	0	1	0	1	0	10
	F	0	0	0	0	1	5	1	0	0	1	1	1	1	2	4	1	0	0	18
Bone and	M	0	0	1	2	2	1	0	0	0	0	0	0	0	1	0	0	1	0	8
Cartilage	F	0	1	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	4
Soft Tissue	M	0	0	0	1	0	0	0	0	0	0	0	0	4	0	2	0	0	0	7
	F	1	0	0	0	0	0	1	0	2	0	0	1	0	2	1	1	0	2	11
Hodgkin's Disease	M	0	0	0	1	5	2	2	0	1	3	1	0	0	1	1	1	0	0	18
	F	0	0	0	0	1	1	0	0	0	0	0	1	0	1	0	0	0	0	4
Lymphoid Tissue	M	0	0	1	1	2	0	6	0	2	6	1	7	5	12	19	10	3	6	81
	F	0	0	0	0	1	1	1	3	0	1	2	4	9	10	11	10	7	5	65
Leukemia	M	3	3	2	1	0	2	3	3	0	1	2	5	4	13	3	11	15	4	75
	F	1	2	0	0	0	1	1	0	1	0	4	3	6	1	2	7	6	3	38
Multiple Myeloma	M	0	0	0	0	0	0	0	0	0	1	1	3	3	6	3	4	2	3	26
	F	0	0	0	0	0	0	0	0	0	0	0	0	3	1	2	3	9	0	18
Miscellaneous	M	1	0	0	1	0	1	2	1	2	2	2	1	2	4	2	5	1	2	29
	F	0	0	0	0	1	0	0	1	0	0	0	1	1	0	0	3	2	2	11
Primary Unknown	M	0	0	0	1	0	0	0	0	0	0	1	4	4	3	9	5	4	2	33
	F	0	0	0	0	0	0	0	0	0	0	1	3	14	5	7	10	6	4	50
Total — All Sites	M	7	4	7	9	11	12	29	17	27	54	59	169	222	343	367	307	249	153	2,046
	F	2	4	2	3	10	26	32	52	52	71	111	140	227	225	245	228	133	131	1,694
Total Cases		9	8	9	12	21	38	61	69	79	125	170	309	449	568	612	535	382	284	3,740

Note: Table excludes non-melanoma skins, in-situ and death certificates only.

Statistical Tables

Non-Melanoma Skins, In-Situ and Death Certificate Only — 1988

SITE	Sex	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	Total
Skin	M	0	0	0	1	0	0	9	17	31	27	37	76	128	167	183	186	134	105	1101
	F	0	0	0	1	1	4	7	14	25	19	28	37	71	110	119	110	104	116	766
Cervix (In-Situ)	F	0	0	0	1	0	9	5	5	5	3	2	4	0	0	0	2	0	0	36
Other (In-Situ)	M	0	0	0	0	0	0	0	2	5	3	2	11	22	14	14	26	10	9	118
	F	0	0	0	0	0	0	2	2	3	2	12	5	6	11	17	19	13	19	111
Death Certificates	M	0	0	0	0	0	0	0	0	2	0	0	1	4	8	5	15	8	17	60
	F	0	0	0	0	0	0	0	0	0	0	2	2	2	4	5	6	11	20	52
Total — All Sites	M	0	0	0	1	0	0	9	19	38	30	39	88	154	189	202	227	152	131	1,279
	F	0	0	0	2	1	13	14	21	33	24	44	48	79	125	141	137	128	155	965
Total Cases		0	0	0	3	1	13	23	40	71	54	83	136	233	314	343	364	280	286	2,244

Incidence of Cancer Per 100,000 Population — 1988

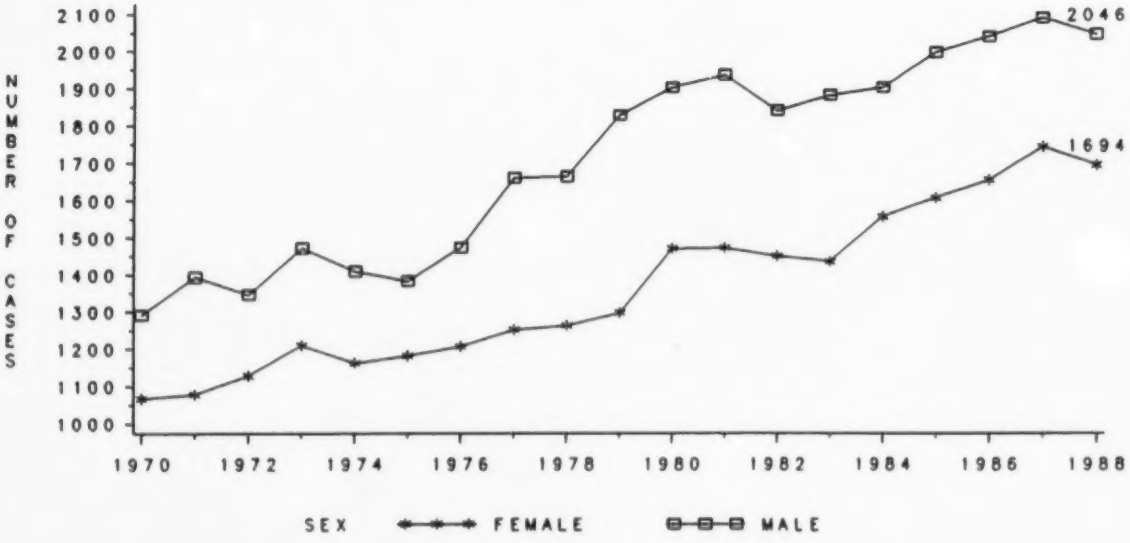
Site	Total Population		Population at Risk	
	Male	Female	Male	Female
Lip	12.2	1.1	29.4	2.6
Oral Cavity	4.5	4.4	11.0	10.1
Pharynx and Nasopharynx	1.9	1.1	4.6	2.6
Oesophagus	4.9	2.1	11.9	4.8
Stomach	13.3	7.3	32.2	16.6
Small Intestine	1.3	1.7	3.2	3.9
Colon	37.2	31.5	89.7	72.0
Rectum	22.1	15.7	53.3	36.0
Liver	5.7	5.5	13.8	12.7
Pancreas	8.3	10.5	20.2	24.1
Larynx	7.6	0.5	18.4	1.3
Lung	68.3	28.0	164.7	64.1
Breast	0.7	96.6	1.8	220.9
Prostate	88.1	0.0	212.6	0.0
Testis	2.2	0.0	3.0	0.0
Other Male Organs	2.0	0.0	5.0	0.0
Cervix (Invasive)	0.0	9.9	0.0	14.4
Uterus	0.0	19.2	0.0	43.9
Ovary	0.0	12.6	0.0	28.9
Other Female Organs	0.0	1.9	0.0	4.3
Other Urinary Organs	15.4	8.2	37.2	18.8
Urinary Bladder	24.6	9.8	59.3	22.4
Malignant Melanoma (skin)	8.3	10.9	20.2	25.0
Brain and Nervous System	6.1	4.0	14.7	9.2
Thyroid	1.9	3.4	4.6	7.9
Bone & Cartilage	1.5	0.7	3.6	1.7
Soft Tissue	1.3	2.1	3.2	4.8
Hodgkin's Disease	3.4	0.7	4.5	1.0
Lymphoid Tissue	15.4	12.4	37.2	28.5
Leukemia	14.3	7.3	34.5	16.6
Multiple Myeloma	4.9	3.4	11.9	7.9
Miscellaneous	5.5	2.1	13.3	4.8
Primary Unknown	6.2	9.6	15.1	21.9
Total — All Sites	390.5	325.6	941.6	744.2
Total — All Sites — Both Sexes	358.1		840.6	

Note: Table excludes non-melanoma skins, in-situ and death certificates only.

Statistical Tables

PROVINCIAL INCIDENCE

NUMBER OF CASES



NON–MELANOMA SKIN AND IN–SITU CASES EXCLUDED

Financial Statements

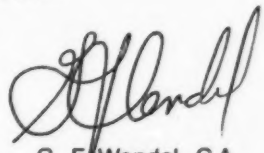
Year Ended March 31, 1989

AUDITOR'S REPORT

To the Members of the Legislative Assembly
Province of Saskatchewan

I have examined the balance sheet of the Saskatchewan Cancer Foundation as at March 31, 1989 and the statements of revenue and expenditure and fund balance for the year then ended. My examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as I considered necessary in the circumstances.

In my opinion, these financial statements present fairly the financial position of the Saskatchewan Cancer Foundation as at March 31, 1989 and the results of its operations and changes in financial position for the year then ended in accordance with the accounting principles disclosed in Note 2 to the financial statements applied on a basis consistent with that of the preceding year.



Regina, Saskatchewan
November 9, 1989

G. F. Wendel, C.A.,
A/Provincial Auditor

Financial Statements
Year Ended March 31, 1989

SASKATCHEWAN CANCER FOUNDATION
BALANCE SHEET
As At March 31

Statement 1

	1989						1988
	General Fund	Major Equipment Grant Fund	Saskatoon Clinic Construction Fund	Research Fund	Trust Fund	Total	Total
Assets							
Current:							
Cash and short-term investments	$ 1,838,143	$ —	$ —	$ 667,452	$ 1,065,140	$ 3,570,735	$ 3,519,656
Accounts receivable:							
— Department of Health	955,302	—	—	—	—	955,302	500,622
— Other and accrued interest (Note 9)	93,322	—	246,551	34,862	13,341	388,076	523,582
Prepaid Expenses	45,073	—	—	3,200	—	48,273	42,170
	2,931,840	—	246,551	705,514	1,078,481	4,962,386	4,586,030
Fixed Assets (Note 4)	22,639,136	—	—	121,815	—	22,760,951	23,919,451
	$ 25,570,976	$ —	$ 246,551	$ 827,329	$ 1,078,481	$ 27,723,337	$ 28,505,481
Liabilities and Equity							
Liabilities:							
Accounts Payable:							
— Trade	$ 1,441,588	$ —	$ —	$ 14,783	$ 12,821	$ 1,469,192	$ 1,351,443
— Major Equipment	—	2354	—	—	—	2354	—
— Construction of Saskatoon Cancer Clinic	—	—	30,757	—	—	30,757	424,550
Deferred revenue	3,185	—	—	—	—	3,185	4,160
Due to (from) other funds	234,249	(492,167)	258,219	(301)	—	—	—
	1,679,022	(489,813)	288,976	14,482	12,821	1,505,488	1,780,153
Equity:							
Fund balance (Statement 3)	23,891,954	489,813	(42,425)	812,847	1,065,660	26,217,849	26,725,328
	$ 25,570,976	$ —	$ 246,551	$ 827,329	$ 1,078,481	$ 27,723,337	$ 28,505,481

(See accompanying notes)

Financial Statements

Year Ended March 31, 1989

SASKATCHEWAN CANCER FOUNDATION
STATEMENT OF REVENUE AND EXPENDITURE

Year Ended March 31

Statement 2

	1989						1988
	General Fund	Major Equipment Grant Fund	Saskatoon Clinic Construction Fund	Research Fund	Trust Fund	Total	Total
Revenue:							
Grants — Department of Health	$ 18,231,530	$ —	$ —	$ 358,750	$ —	$ 18,590,280	$ 17,891,000
— Saskatoon Clinic Construction (Note 7)	—	—	635,309	—	—	635,309	7,179,100
— Other	87,248	—	—	116,160	—	203,408	159,684
Donations and bequests	—	—	—	—	209,808	209,808	196,153
Investment income	314,580	49,409	—	64,918	95,718	524,625	411,707
Other income	298,626	—	—	—	—	298,626	279,667
	18,931,984	49,409	635,309	539,828	305,526	20,462,056	26,117,311
Expenditures:							
Clinics and general administration							
Salaries and employee benefits	8,112,171	—	—	—	—	8,112,171	7,057,107
Medical services	4,629,119	—	—	—	—	4,629,119	4,614,321
Drugs and medical supplies	2,787,907	—	—	—	—	2,787,907	2,434,707
Purchased services							
— laboratory services	382,797	—	—	—	—	382,797	354,222
— diagnostic radiology	424,456	—	—	—	—	424,456	449,095
— isotope services	324,838	—	—	—	—	324,838	252,151
— operating room services	75,810	—	—	—	—	75,810	70,375
Computer services	150,861	—	—	—	—	150,861	147,263
Building, equipment and leasehold alterations	173,395	306,104	266,276	—	32,728	778,503	7,917,467
Postage, printing and stationery	128,364	—	—	—	298	128,662	125,886
Repairs and maintenance of equipment	192,806	—	—	—	—	192,806	243,053
Telephone	111,467	—	—	—	—	111,467	95,693
Travel and staff development	111,389	—	—	—	6,228	117,617	100,483
Utilities	118,472	—	—	—	—	118,472	57,918
Other expenditures	525,337	—	—	—	29,729	555,066	399,433
Patient lodges (Note 8)							
Salaries and employee benefits	328,736	—	—	—	—	328,736	283,597
Other lodge operating costs	174,974	—	—	—	—	174,974	184,367
Grants:							
Research grants (Schedule 1)	—	—	—	378,839	—	378,839	393,065
Trust Fund grants	—	—	—	—	37,934	37,934	36,744
	18,752,899	306,104	266,276	378,839	106,917	19,811,035	25,216,947
Excess of revenue over expenditure (expenditure over revenue) — to Statement 3	$ 179,085	$ (256,695)	$ 369,033	$ 160,989	$ 198,609	$ 651,021	$ 900,364

(See accompanying notes)

SASKATCHEWAN CANCER FOUNDATION
STATEMENT OF FUND BALANCE
Year Ended March 31

Statement 3

	1989						1988
	General Fund	Major Equipment Grant Fund	Saskatoon Clinic Construction Fund	Research Fund	Trust Fund	Total	Total
Accumulated surplus:							
Balance, beginning of year	$ 1,073,733	$ 746,508	$ (411,458)	$ 530,043	$ 867,051	$ 2,805,877	$ 1,884,891
Add (deduct): Excess of revenue over expenditure (expenditure over revenue) (Statement 2)	179,085	(256,695)	369,033	160,989	198,609	651,021	900,364
	1,252,818	489,813	(42,425)	691,032	1,065,660	3,456,898	2,785,255
Add: Final settlement payment — previous year	—	—	—	—	—	—	20,622
Balance, end of year	1,252,818	489,813	(42,425)	691,032	1,065,660	3,456,898	2,805,877
Equity in fixed assets:							
Balance, beginning of year	23,773,948	—	—	145,503	—	23,919,451	16,866,708
Add: Fixed assets purchased by:							
— General Fund - net of disposal	154,750	—	—	—	—	154,750	120,922
— Major Equipment Grant Fund	306,104	—	—	—	—	306,104	1,752,127
— Saskatoon Clinic Construction Fund	266,276	—	—	—	—	266,276	5,777,310
— Research Fund (Note 5)	—	—	—	10,528	—	10,528	42,555
— Trust Fund	32,728	—	—	—	—	32,728	269,298
	24,533,806	—	—	156,031	—	24,689,837	24,828,920
Deduct: Provision for depreciation	(1,894,670)	—	—	(34,216)	—	(1,928,886)	(909,469)
Balance, end of year	22,639,136	—	—	121,815	—	22,760,951	23,919,451
Fund balance, end of year — to Statement 1	$ 23,891,954	$ 489,813	$ (42,425)	$ 812,847	$ 1,065,660	$ 26,217,849	$ 26,725,328

(See accompanying notes)

SASKATCHEWAN CANCER FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS
March 31, 1989

1. **Legal Status of the Saskatchewan Cancer Foundation**

   The Foundation was created under provisions of The Saskatchewan Cancer Foundation Act, 1979 and commenced operations on August 1, 1979.

   Under Section 38(1) of the Act, the Foundation acquired ownership of the assets and rights and assumed responsibility for the debts, liabilities, and obligations of the Government of Saskatchewan and the Saskatchewan Cancer Commission relating to the operation of the clinics in Regina and Saskatoon under The Cancer Control Act.

2. **Significant Accounting Policies**

   a) **Fixed Assets and Depreciation**

   The Saskatchewn Cancer Foundation utilizes fund accounting wherein all revenues and expenditures including those for fixed assets appear in the statement of revenue and expenditure. To maintain accountability for fixed assets, it is necessary to record them as assets with a corresponding entry to "equity in fixed assets". All fixed assets costing $100 or more are recorded in this manner.

   Fixed assets purchased through the Major Equipment Grant Fund, the Saskatoon Clinic Construction Fund and the Trust Fund are presented as assets of the General Fund. These acquisitions are not included in the fixed asset expenditures of the General Fund but are recorded as expenditures in the Fund to which they apply. Assets purchased by the Research Fund are recorded as assets of that Fund. Donated assets are recorded at their estimated cost in the General Fund as a credit to "equity in fixed assets".

   Fixed assets of the Foundation are depreciated on a straight-line basis over their estimated useful lives at rates ranging from 5% to 20% per annum.

   As the acquisition of fixed assets is primarily financed by government grants, a provision for depreciation is not charged to operations but is charged to "equity in fixed assets" to reflect the decrease in the undepreciated cost of the fixed assets.

   b) **Grant Revenue and Final Settlement Adjustments**

   Grant revenue from the Department of Health is recorded on the accrual basis in accordance with the funding policy determined by the Department. Adjustments to estimated surpluses or deficits, as determined in the annual settlement review by the Department, are accounted for in the year that they are determined as adjustments to accumulated surplus or deficits.

   In accordance with the funding policy of the Department, any operating surplus, exclusive of donations and investment income, is repayable to the Department after the final settlement review is complete. A deficit on operations is the responsibility of the Foundation unless a prior commitment for reimbursement has been recognized by the Department.

   c) **Research Grants**

   Research grants awarded by the Foundation to aid in funding approved research projects are charged to expenditure in the year in which costs are incurred on the projects.

d) **Donations**

All donations are treated as revenue of the Trust Fund, which has specifically been established to administer such revenue and related expenditures.

Certain contributions to the Trust Fund are designated by the contributors to be used for such purposes as cancer research, equipment and library books. The Foundation maintains a record of the funds contributed and spent for each of the designated purposes until such funds are fully utilized (See Note 3).

e) **Investment Income — Major Equipment Grant Fund and Saskatoon Clinic Construction Fund**

Unexpended monies of the Major Equipment Grant Fund and of the Saskatoon Clinic Construction Fund held in the General Fund, are invested in short-term securities. The interest derived from these investments is credited to the relevant fund.

3. **Restricted Trust Funds**

At March 31, 1989, a balance of $165,865 ($160,645 at March 31, 1988) remained to be used for the purposes designated by the contributors.

4. **Fixed Assets**

	1989			1988
	Cost	Accumulated Depreciation	Net Book Value	Net Book Value
a) **General Fund**				
Land & improvements	$ 285,002	$ 2,542	$ 282,460	$ 282,899
Buildings	18,157,558	1,386,011	16,771,547	17,515,632
Leasehold alterations	468,824	128,228	340,596	364,256
Equipment & furniture	10,614,088	5,369,555	5,244,533	5,611,161
	$ 29,525,472	$ 6,886,336	$ 22,639,136	$ 23,773,948
b) **Research Fund**				
Equipment and furniture	$ 306,574	$ 184,759	$ 121,815	$ 145,503

5. **Research Fund**

The Department of Health has provided grants to enable the Foundation to support a number of research projects. The Department has attached the following guidelines to the grants:

a) expenditure of grant funds will be at the discretion of the Foundation. The Foundation will assume responsibility for research costs in excess of the amount granted;

b) research funds, including investment income on the funds, will be kept separate from other funds of the Foundation.

The Foundation has met these guidelines by establishing the Research Fund, separate from other funds of the Foundation, from which research grants are made.

Included in Research Grants are expenditures totalling $10,528 (1988 - $42,555) for fixed assets required for certain research projects. Ownership of these assets is retained by the Foundation.

At March 31, 1989, the Research Fund was committed to expenditures totalling $330,971 ($263,489 at March 31, 1988), being the unexpended portion of approved research project awards.

6. **Major Equipment Grant Fund**

The Department of Health provided grant funds totalling $5,000,000 for the acquisition of certain major equipment in the period 1983 to 1988. The funds are to be accounted for separately from other equipment grants made through the regular budgetary process thereby permitting any unexpended funds from a preceding year to be carried forward.

At March 31, 1989, there were no commitments (1988 - $320,000) for major equipment.

7. **Saskatoon Clinic Construction Fund and Saskatchewan Property Management Corporation**

Similar to the Major Equipment Fund, the funds for the Saskatoon Clinic Construction are to be accounted for separately from other funding made through the regular budgetary process.

Funding for capital projects is arranged through an agreement with the Saskatchewan Property Management Corporation (SPMC) and the Province of Saskatchewan. Under the terms of the agreement, the repayment requirements of the obligation and the interest rate applicable to the funding received are determined from time to time by the Minister of Finance. The agreement states that the obligation of the Saskatchewan Cancer Foundation (SCF) is limited to an amount equal to the funds received from the Province for this repayment purpose and also provides for the repayment of these funds by the Province directly to SPMC on behalf of the SCF. Due to the nature of this agreement, no liability is recorded in the financial statements of the SCF. Loan proceeds from SPMC are recorded as capital grants in the year in which they are received.

The balance of loans outstanding including accrued interest with respect to this financing arrangement at March 31, 1989 was $18,034,904 (March 31, 1988 - $17,156,959).

As at March 31, 1989, no commitments remained towards the construction of the facility (1988 - $44,000).

8. **Cancer Patient Lodges**

The Canadian Cancer Society, Saskatchewan Division, has donated two cancer patient lodges in the province to the Foundation. Under the terms of the agreement with the Society, the Foundation has assumed responsibility for the operations of these lodges. Title to the properties will remain with the Foundation so long as they are operated as cancer patient lodges.

Title to the property for the 28 bed fully equipped lodge in Saskatoon was transferred to the Foundation in 1983-84. The estimated cost of this lodge's land, building and equipment is $1,443,333.

The 28 bed fully equipped lodge in Regina was donated in 1985-86, with the final agreement and transfer of title occurring in April, 1986. The estimated cost of this lodge's land, building and equipment is $1,848,392.

In accordance with the accounting policy of the Foundation, the above lodges are recorded in these financial statements as "Fixed Assets" and "Equity in Fixed Assets."

9. **Related Party Transactions**

Included in these financial statements are expense amounts resulting from transactions conducted with the hospitals in which the cancer clinics are located. Account balances resulting from these transactions are included in the statement of financial position and are settled on normal trade terms.

In addition, in accordance with signed agreements with the hospitals in which the cancer clinics are located, the Foundation has not been charged with occupancy costs relating to the clinics, but leases the clinics for $1 each per year.

10. **Comparative Information**

Certain 1988 balances have been reclassified to conform with the current year's presentation.

Schedule 1

SASKATCHEWAN CANCER FOUNDATION
RESEARCH FUND
SCHEDULE OF RESEARCH GRANTS

Year Ended March 31

	1989	1988
Participation in North Central Cancer Treatment Group	$ 77,380	$ 81,899
Extension of Treatment Planning Function, Regina	26,462	30,267
Lung Cancer and Farming Study, Saskatoon	—	1,198
Chemotherapeutic Agents in Patients, Saskatoon	—	790
Radiotherapy Automation Project, Regina	39,762	37,442
Participation in Children's Cancer Study Group	54,694	58,292
Participation in Radiation Therapy Oncology Group	10	9,381
Leukemias and Non-Hodgkin's Lymphomas, Saskatoon	33,001	15,348
Review of Treatment Results, Regina	141	13,379
Dynamic Cardiac Phantom, Regina	—	(41)
Radiation Area Surveillance System, Saskatoon	—	93
Dose Calculation, Regina	11,655	19,953
Flow Cytometer/Cell Sorter, Saskatoon	17,361	4,191
Digital Imaging of Megavoltage Photon Beams, Saskatoon	—	2,359
Evaluation of In Vitro Chemosensitivity, Regina	51,101	58,152
Software Infrastructure Development, Saskatoon	—	9,778
Dietitian Participation in North Central Cancer Treatment Group, Saskatoon	2,913	7,656
Cancer in Saskatchewan, A Statistical Evaluation, Regina	7,313	18,598
Philips SL25 - Related Software Development, Saskatoon	33,380	17,396
Development of Quantitative Radionuclide Cardiography, Regina	23,666	6,934
	$ 378,839	$ 393,065

Donations

The Saskatchewan Cancer Foundation is grateful to those who have donated money or equipment to the cancer clinics and lodges. These donations include "in memoriam" contributions, private donations, estate bequests and charitable organization contributions.

Donations are used to assist in the funding of:

— Medical, research or patient lodge equipment.
— Grants for continuing professional education.
— The volunteer program within the clinics.
— Patient amenities.

The Allan Blair Memorial Clinic/Regina Patient Lodge wish to thank the following contributors of $100.00 or more:

Allan, Mr. & Mrs. R.H., Regina, Sask.
Bachert, Elda, Windthorst, Sask.
Ball, Mr. & Mrs. Reg, Estevan, Sask.
Beres, Mr. & Mrs. Albert, Melville, Sask.
Bilous, Victoria, Ebenezer, Sask.
Blackwoods Beverage Ltd., Regina, Sask.
Blondeau, Mildred, Estevan, Sask.
Bryson, Jim, Chase, B.C.
Bryson, Pearl, Coquitlam, B.C.
CBR Cement Canada Ltd., Regina, Sask.
Chayko, Steve, Foam Lake, Sask.
CKRM Good Neighbour Fund, Regina, Sask.
Clarke, Ivor, Lake Alma, Sask.
Coe, Mr. & Mrs. A.B., Regina, Sask.
Coffey, G.A., Carlyle, Sask.
Coffey, Clara, Carlyle, Sask.
Conrad, Isabel, Estevan, Sask.
Conrad, Arthur, Estevan, Sask.
Cooper, Charles, Kamsack, Sask.
Creelman & District Donor's Choice, Creelman, Sask.
Crossman, Nancy, Regina, Sask.
Crowley, Hazel, Tisdale, Sask.
Dickey, Earl, Govan, Sask.
Domes, Helen, Verwood, Sask.
Dominion Bridge Staff, Regina, Sask.
Domstad, Della, Estevan, Sask.
Drozdowski, Stanley, Swift Current, Sask.
Dubiel, Nellie, Yorkton, Sask.
Eager, Dr. Evelyn, Regina, Sask.
Emmel, Frances, Torquay, Sask.
Epp, Jeanette, Regina, Sask.
Estate of Elizabeth Kerr, Regina, Sask.
Estate of Jessie Morehead Boles, Regina, Sask.
Estevan Canadian Order of Foresters, Estevan, Sask.
Eyebrow & District Donor's Choice, Eyebrow, Sask.
Frew, Stewart H., Regina, Sask.
Fujita, Irene
Gallaugher, Tom, Moose Jaw, Sask.
Gibbons, Margaret, Alameda, Sask.
Grand Chapter of the Order of the Eastern Star, Saskatoon, Sask.
Gray, William, Winnipeg, Man.
Hagen, Emma, Lake Alma, Sask.
Haimila, Maxine, Brentwood Bay, B.C.
Harker, Douglas, Regina, Sask.
Hart, Ivan, Fillmore, Sask.
Hilts, Verne, Regina, Sask.
Hoath, John, Willow Bunch, Sask.
Hope, Glen, Gravelbourg, Sask.
Horvath, Rose, Quinton, Sask.
IBM Canada Ltd., Markham, Ont.
Jasper, John, Southey, Sask.
Johnson, Aimee, Sun Lake, AZ
Jurgens, Anton, Melville, Sask.
Kato, Andrew, Southey, Sask.
Kelln, Ben, Govan, Sask.
Kennedy, Frieda, McLean, Sask.
Kiwanis Club of Wascana, Regina, Sask.
Kraft, Alfred & Violet, Odessa, Sask.
Krause, Clarence, Regina, Sask.
Latoski, Paul & Myrtle, Wishart, Sask.
Laub, Steve, Estevan, Sask.
Longton, Daniel & Pauline, Cadillac, Sask.
MacDonald, G.G., Carlyle, Sask.
McCarthy, Richard, Punnichy, Sask.
McCrone, Kathleen, Windsor, Ont.
McKellar, Mr. & Mrs. Duncan, Avonlea, Sask.
McMillan, Mr. & Mrs. I., Craik, Sask.
Measner, Ken, Holdfast, Sask.
Meldrum, Delanne, Regina, Sask.
Middlemiss, Alfred, Yorkton, Sask.
Moe, Evelyn, Craik, Sask.
Mossman, Helenora, Melville, Sask.
Naomi Rebekah Lodge #3, Regina, Sask.
Nath, Punam, Regina, Sask.
New Hastings Community Club, Moosomin, Sask.
Newlove, Mamie, Imperial, Sask.
Order of the Eastern Star, Saskatoon, Sask.
Ormiston, J. H., Fort Qu'Appelle, Sask.
Orr, Florence, Regina, Sask.
Palm Dairies Ltd., Edmonton, Alta.
Parkin, Leonora, Middlesex, England
Pearce, Gordon, Yorkton, Sask.
Pochylko, David, Regina, Sask.
Potts, Dorothy, Whitewood, Sask.
Reed, Eva, Oxbow, Sask.
Regina Beach Golf Syndicate, Regina, Sask.
Regina Telephone Employees Benevolent Fund, Regina, Sask.
Rice, Loy, Moose Jaw, Sask.
Richardson, Mary, Regina Beach, Sask.
Richardson, Barry, Regina, Sask.
Rivovar, William, Leross, Sask.
Robb, William & Thelma, Moose Jaw, Sask.
Rommel, Esther, Regina, Sask.
Rouleau High School Student Council, Rouleau, Sask.
Royal Bank of Canada, Regina, Sask.
Ruth Pawson School Fund, Regina, Sask.
Salamon, Michael, Regina, Sask.
Sanden, Luretta, Craik, Sask.

Donations

SaskTel, Product Marketing Dept., Regina, Sask.
Saskatchewan Gaming Commission, Regina, Sask.
Sattler, Frank, Milestone, Sask.
Sawyer, Bridie, Carnduff, Sask.
Schaeffer Family Reunion 88, Regina, Sask.
Schmid, Lydia, Whitewood, Sask.
Schneider, Christine, Regina, Sask.
Seven Oaks Motor Inn, Regina, Sask.
Sherwood Credit Union, Regina, Sask.
Shier, Jeanne, Estevan, Sask.
Sinclair, Joe, Regina, Sask.
Sinis, Domnicky, Regina, Sask.
Slimmon, Lyle & Jean, Stoughton, Sask.
Smith, Eileen, Edmonton, Alta.
Staudt, Doris, Regina, Sask.
Stone, R.C., Manor, Sask.
Swenson, John, Kelliher, Sask.
Thompson, Orville, Maryfield, Sask.
Thompson, Ian, Whitewood, Sask.
Trehas, John, Regina, Sask.
United Way of Regina, Regina, Sask.
Wallace, Mr. and Mrs. W., Stoughton, Sask.
Werkhoven, M., Swift Current, Sask.
Whitby, Willis, Swift Current, Sask.
Wiebe, Mr. P.P., Gouldtown, Sask.
Zinklam, Herman, Regina, Sask.
Zone 7 Square & Round Association, Regina, Sask.
Zotzman, Herbert & Mary, Regina, Sask.
Zwarych, Elsie, Rose Valley, Sask.

In addition, there were 578 donations under $100.00.

The Saskatoon Cancer Clinic/Saskatoon Patient Lodge wish to thank the following contributors of $100.00 or more:

Adams, Jack
Adria Laboratories of Canada Limited, Mississauga, Ont.
Alexander, Hubert (Estate), Nipawin, Sask.
Barclay, Robert, Leroy, Sask.
Basler, Richard, Prince Albert, Sask.
Bieber, Phyllis, Humboldt, Sask.
Birdsall, Clara, Kerrobert, Sask.
Blakely, John (Estate), Wynyard, Sask.
Blechinger, Bernard, Annaheim, Sask.
Blue, M., Saskatoon, Sask.
Brigdens Printers & Publishers, Regina, Sask.
Bristol Myers Canada Limited, Ottawa, Ont.
Brown, I.B., Preeceville, Sask.
Bunz, Edmond, Humboldt, Sask.
Burgess, Keith A., Saskatoon, Sask.
C.B.R. Cement Canada Limited, Regina, Sask.
C.N.R. Employees, Saskatoon, Sask.
Carlson, Ada, Watrous, Sask.
Christie, R., Vancouver, B.C.
Codette & District Lions Club, Codette, Sask.
Cunningham, Jack, Milden, Sask.
Dodsland Donor's Choice, Dodsland, Sask.
Doonan, Lindsay K., Maple Creek, Sask.
Dreaver, Nellie G., Kenaston, Sask.
Duck Lake & District Donors Choice, Duck Lake, Sask.
Eaket, Robert, North Battleford, Sask.
Edwards, Elizabeth, Prince Albert, Sask.
Elinsky, Eleanor, Prince Albert, Sask.
Ferguson, Gertrude, Wilkie, Sask.
Fouldes, Earl, Vawn, Sask.
Friends of Mary Latimer, Medstead, Sask.
Furseth, John, Swift Current, Sask.
Fusick, Mr. & Mrs. John, Blaine Lake, Sask.
Gill, Bill, Prince Albert, Sask.
Gillard, Luella, Wynyard, Sask.
Gorniak, Michael J., Tisdale, Sask.
Gradin, Elaine, Saskatoon, Sask.
Grand Chapter Order of the Eastern Star
Graves, Gil, Yorkton, Sask.
Gupta, Ishwa, Saskatoon, Sask.
Hardy, Effie, Yorkton, Sask.
Heffernan, Jack, Birch Hills, Sask.
Hinde, Rhoda, Waseca, Sask.
Hnenny, Vera, Saskatoon, Sask.
Holmes, Charles D., Saskatoon, Sask.
Holmes, Edith, Saskatoon, Sask.
Holmes, Russell A., Saskatoon, Sask.
Howland, Frances J., Prince Albert, Sask.
Hradecki, George W., Prince Albert, Sask.
Humanitas Inc., Saskatoon, Sask.
Hyland, Charles, Saskatoon, Sask.
Isbister, Raymond, Saskatoon, Sask.
James, Melvin, Lashburn, Sask.
Jones, Chas. E., Elrose, Sask.
Kartes, Margaret, Saskatoon, Sask.
Kasun, Rose, Cudworth, Sask.
Kinette Club of Saskatoon, Saskatoon, Sask.
Knorr, Richard P., Kerrobert, Sask.
Kozlowski, S., Saskatoon, Sask.
Lake Lenore Lioness Club, Lake Lenore, Sask.
Lang Dunlop, Calgary, Alta.
Larson, Anne M., Kamsack, Sask.
Lemko, John, Quill Lake, Sask.
Lewis, Patricia, Nokomis, Sask.
Loomes, Adeline, Saskatoon, Sask.
Main, Arnold (Estate), Saskatoon, Sask.
McGowan, Ron & Donna, Saskatoon, Sask.
Minduik, Jennie, Prince Albert, Sask.
Moggey, Norah, Melfort, Sask.
Morrison, Irma, Rosetown, Sask.
Nilsen, Mabel, Kelvington, Sask.
Olson, H.N.W., Melfort, Sask.
Orr, Lyle E., Unity, Sask.
Patton, Amelia A., Lloydminster, Sask.
Pavelich, Milton, Saskatoon, Sask.
Pearson, Winnifred, Kelvington, Sask.
Potoreyko, Annie, Porcupine Plain, Sask.
POW City Kinette Club, Saskatoon, Sask.
Range, Louise M., Livelong, Sask.
Remlinger, Paul, Liberty, Sask.
Robbins, Raphael (Estate), North Battleford, Sask.
Rogers, R., North Battleford, Sask.
Rutledge, Mildred, Saskatoon, Sask.
Salway, Owen, Meadow Lake, Sask.
Saskatoon Radio Cabs, Saskatoon, Sask.
Saville, Francis (Estate), Saskatoon, Sask.
Scholz, Florentine, Wilkie, Sask.
Schroeder, Freda L., Jansen, Sask.

Donations

Scott, J. H. (Jack), Eston, Sask.
Scott, J. Stewart, Eston, Sask.
Simonar, Helen, Shell Lake, Sask.
Smith, David H., Melfort, Sask.
Soiseth, Nels, North Battleford, Sask.
Sondrol, Ken, Cabri, Sask.
Stevenson, Grant, Saskatoon, Sask.
Stevenson, Todd, Halifax, Nova Scotia
Tollefson, Grace, Saskatoon, Sask.
Trout, Jean, Saskatoon, Sask.
Ukrainian Women's Association of Canada, Saskatoon, Sask.
Upjohn Company of Canada, Don Mills, Ont.
Wall, Rod, Saskatoon, Sask.
Walter, Charles, Quill Lake, Sask.
Werezak, Stanley & Family, Saskatoon, Sask.
Woodkey, Henry, Tisdale, Sask.
Yost, Harley, Swift Current, Sask.
Young, George, Unity, Sask.
Zaleschuk, Steve, Wakaw, Sask.

In addition, there were 626 donations under $100.00.

Research Projects

Funded by the Saskatchewan Cancer Foundation Research Fund

Participation in North Central Cancer Treatment Group (NCCTG)

Poon, M.A. and Maksymiuk, A.W., in collaboration with the medical staff of the Saskatoon Cancer Clinic and the Allan Blair Memorial Clinic, Regina

Active participation in NCCTG Clinical Trials continues at both cancer clinics. For the 12 months ending 31st March 1989, 56 Saskatchewan residents participated in active treatment studies and 184 in cancer control studies.

Saskatchewan participation has been particularly strong in protocols for advanced colorectal cancer, small cell lung cancer and the hemoquant study for early detection of colon cancer.

The Clinics were audited in October 1988 by a site review team from the Mayo Clinic and NCCTG. Some problems were identified in the investigational drug audit and measures have been implemented to correct them. The overall report was satisfactory.

Dr. David McGowan completed a second year as Chairman of the Radiotherapy Sub-committee. Dr. Michael Poon and Dr. Andrew Maksymiuk continued as co-principal investigators for the Allan Blair Memorial Clinic and Saskatoon Cancer Clinic respectively.

Extension of Treatment Planning Function, Regina

Dickof, P. A. and Winnicki, A.

Treatment planning systems are used to model the distribution of radiation administered in radiotherapy treatments. The objective of this project is to add three dimensional dose calculations and displays to the treatment planning system at the Allan Blair Memorial Clinic. Programs have been written to calculate the dose at any point in a three dimensional volume and work is now underway to integrate these into the treatment planning system for clinical use. An algorithm has been devised for performing line integrals rapidly, and used in ray-tracing through CT data sets to produce either a three dimensional surface-rendered image or a pseudo-x-ray image. These displays currently require a large number of CT slices to be unambiguous. We are now investigating the use of interpolation schemes to reduce the number of slices required.

Participation in Children's Cancer Study Group

Goh, T. S.

Dr. T. S. Goh assumed responsibility as principal investigator on this research project.

Reinstatement of membership in the Children's Cancer Study Group is being pursued through affiliation with the North Central Cancer Treatment Group.

Leukemias and Non-Hodgkins Lymphomas

Skinnider, L. F. and Maksymiuk, A. W.

In the past year, surface marker profiles were carried out on 85 cases of leukemias and lymphomas.

Methodology for Ig gene rearrangement has been established and reports issued.

Research Projects

Funded by the Saskatchewan Cancer Foundation Research Fund

Radiotherapy Automation Project

Schmid, M. G.

The radiotherapy automation project is an ongoing project, the aim of which is to enable the development of new devices that could be used to automate some of the aspects of providing radiotherapy treatments for cancer patients.

In the past year, work on a highly automated water phantom controller which is used to perform output measurements on radiotherapy treatment machines was completed. This controller is now used routinely in the clinic.

Work has begun on a device to automatically measure the distance from the radiation source of a treatment machine to the patient surface. In order to deliver the prescribed radiation dose to a patient, it is important to set this distance accurately. Present reseach is directed at using a laser projector in combination with an imaging sensor to measure the distance. Preliminary lab results are complete and construction of the necessary structure to fit the device onto a treatment machine has begun.

Dose Calculation Using Convolution Techniques

Dickof, P. A. and Mackie, T. R.

The purpose of this project is to produce a clinical implementation of the convolution/superposition method of dose calculation.

An interface between the dose calculation program and the treatment planning system was produced. This allows clinical data to be used for producing convolved doses in a multi-step process. This now provides a complete route for performing calculations, from the input of patient data from the treatment planning systems to the output and display of a calculated dose distribution from the convolution program. A display showing the contour along with the dose distribution has been provided, allowing one to see that the calculations are done correctly.

This research project ended in September, 1988. A paper arising from this work, entitled "Continuous antialiased 2-D and 3-D transformations in discrete space", by A. Snider and T. R. Mackie, was accepted for publication in 1990 by the refereed journal **Computers in Physics.**

Flow Cytometer/Cell Sorter Facility

Warrington, R. C.

New developments have been realized in the L-histidinol/anticancer drug combinations approach to improved cancer chemotherapy.

In general, the facility continues to meet the needs of cancer researchers to a much greater extent than was possible in the past and a considerable number of projects are ongoing.

Evaluation of In Vitro Chemosensitivity

Goh, T. S. and Kirkpatrick, D. L.

A dye exclusion assay was used for determining the chemosensitivity of fresh human leukemia cells to a number of drugs. There was good correlation between in vitro results and clinical responses of patients on chemotherapy with one or more of the tested drugs. An automated colorimetric assay (MT assay) was developed and the results were found to be comparable to those of the more labor intensive dye exclusion assay. Assays that are suitable for chemosensitivity testing of cells from solid tumors are being developed.

Research Projects

Funded by the Saskatchewan Cancer Foundation Research Fund

Dietitian Participation in Co-operative Group Studies

White, D. F.

This project allowed the Cancer Clinic dietitian to be involved in the nutritional aspects of the research programs sponsored by the North Central Cancer Treatment Group and the National Cancer Institute of Canada. The dietitian provided nutrition consultation for the majority of patients who were enrolled in these studies and through her involvement, influenced compliance of patients in these studies.

Cancer in Saskatchewan — A Statistical Evaluation

Benson, D. L. and Robson, D. L. in collaboration with Tan, L.

Cancer incidence data for the years 1970-1987 was divided into 3-year groups by sex, site and census division. Age-specific numbers of expected cases were calculated and the ratio of the number of expected to observed cases were mapped by census division and 3-year groups. The report was reviewed by Dr. R. West, Saskatchewan Health, and Dr. D. Wigle, Health and Welfare Canada, and was approved for distribution in February, 1989.

Philips SL25 — Related Software Development

Baillie, A. D.

The Saskatoon Cancer Clinic has purchased new linear accelerators with control systems which allow more complex treatments to be administered than were possible with previous treatment units.

The aim of this project is to develop software to make it more practical to utilize these capabilities, which will improve the accuracy of patient treatment. This involves preparation of software for data gathering and manipulation; modification of the treatment planning system to allow it to make calculations for these new conditions, and to simplify the transfer of these complex plans into practice; and the modification of the treatment verification system to provide a uniform work environment for operators of all our radiation machines.

Development of Quantitative Radionuclide Cardiography

Mawko, G. M.

The project aims to elucidate the physical details relevant to quantitative radionuclide blood pool imaging, and to use this information to identify and develop accurate, reliable methods for non-invasive left ventricular volume measurements.

These objectives have been met in part through the construction of a three-dimensional dynamic cardiac phantom. As per the original engineering design, the phantom consists of three major components: a fluid driver, heart phantom, and computer sub-systems.

Work continues on developing a technique to fabricate a realistic model of the heart and the simulation of complex arrhythmias in software.

Publications

BENSON, D. L., ROBSON, D. L. Saskatchewan Cancer Foundation Cancer Registry Report. Saskatchewan Cancer Atlas 1970-1987, June 1988.

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Russell, J. A., Blahey, W. B., Stuart, T. A., Edwards, G., CARD, R. T. Avascular Necrosis of Bone Marrow Transplant Patients. Medical Pediatric Oncology, 17:140-143.

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SKINNIDER, L., Stoessl, A., Wang, J. Increased Frequency of Sister Chromatid Exchange Induced by Dothistromin in CHO Cells and Human Lymphocytes. Mutation Research, 222:167-170.

SKINNIDER, L., Wang, J. Inhibition by Human Sera of the Number of Sister Chromatid Exchanges Induced in Human Lymphocytes and Chinese Hamster Ovary Cells by a Mutagen. Proceedings of the 8th Annual Meeting of the American Association for Cancer Research, 30:143.

Sutton, D. M. C., Nair, R. C., Rock, G., and the Canadian Apheresis Study Group (including CARD, R. T.). Complications of Plasma Exchange. Transfusion, 29:124-127.

Sylvia Fedoruk Prize in Medical Physics

Dr. Sylvia O. Fedoruk, a Medical Physicist who gave 35 years of dedicated and distinguished service to the Saskatchewan cancer program, retired in December, 1986. On the occasion of Dr. Fedoruk's retirement, the Board of the Cancer Foundation announced the establishment of the Sylvia Fedoruk Prize in Medical Physics in her honour and in recognition of her contribution. Dr. Fedoruk's quality leadership was not restricted to the cancer program but extended to have a positive influence in the medical physics community, her city, province and country. These leadership qualities were epitomized in 1988 when she became Saskatchewan's 17th Lieutenant Governor.

This annual award is presented to the author selected as having published the best paper in Medical Physics in the preceding year, and must relate to work carried out within a Canadian institution. An anonymous selection committee, appointed jointly by the College of Physicists in Medicine, and the Division of Medical and Biomedical Physicists of the Canadian Association of Physicists, reviews the entries and recommends the successful candidates.

The award has been presented to:

1988 ROBERT NISHIKAWA, GORDON MAWDSLEY, AARON FENSTER, MARTIN YAFFE, co-authors of the paper "Scanned-Projection Digital Mammography" published in Medical Physics.

Historical Background

1929 The Saskatchewan Medical Association appointed a committee to study facilities available in the Province for treatment of cancer and recommended to the Minister of Health that a cancer program be established.

1930 The Saskatchewan Cancer Commission Act was passed which authorized a Commission to establish a cancer control program in Saskatchewan.

1931 Consultative diagnostic treatment clinics were opened at the Regina General Hospital and the Saskatoon City Hospital.

1939 The Regina Cancer Clinic was relocated to the Regina Grey Nuns' Hospital.

1944 The Cancer Control Act replaced the Saskatchewan Cancer Commission Act, and provided treatment at provincial expense for persons who had been resident in the province for more than six months.

1945 Radioactive isotopes were introduced to a limited extent at the clinics.

1947 The Canadian Cancer Society provided a personal service worker at each clinic to help in the personal needs of the patient.

1948 The Regina clinic moved to a newly constructed wing of the Regina Grey Nuns' Hospital and was named the Allan Blair Memorial Clinic in recognition of the contribution of the late Dr. Allan W. Blair to the program.

1949 A 25 million electron volt betatron was installed at the University of Saskatchewan and became available for treatment of patients with advanced cancer.

1951 The first cobalt unit in the world was designed and installed at the Saskatoon Cancer Clinic.

1954 The cancer clinic in Saskatoon was moved to the newly constructed University Hospital.

1958 Treatment was extended as an insured benefit to persons who had been resident in the province for more than three months.

1962 Insured benefits for cancer treatment were extended to Saskatchewan residents who received treatment outside the province.

1963 Renovation and expansion of radiotherapy facilities at the Allan Blair Memorial Clinic were completed.

1966 Insured benefits were extended to landed immigrants from the day of arrival.

1970 The Minister of Public Health established a study team to review and examine all aspects of cancer care in Saskatchewan and the report was made available in 1972.

1972 A new radiotherapy facility was opened at the Saskatoon Cancer Clinic which included a new 42 million electron volt betatron.

1973 The Cancer Control Act was amended to provide for the establishment of trust funds which could receive gifts, donations, bequests or grants.

1975 Nuclear medicine services were transferred from the cancer program to the Boards of the University Hospital and the South Saskatchewan Hospital Centre as hospital-based services.

Historical Background

1978 Dr. T. A. Watson completed a study titled "A Report on Some Aspects of the Saskatchewan Cancer Program". Several recommendations were made in the report including the establishment of the Saskatchewan Cancer Foundation to replace the Cancer Commission and the purchase of a linear accelerator for the Allan Blair Memorial Clinic.

Construction was completed on the expanded and renovated radiotherapy facilities at the Allan Blair Memorial Clinic.

1979 The Saskatchewan Cancer Foundation Act was passed establishing a Foundation to replace the Cancer Commission. Under this Act, the Foundation conducts a program for the diagnosis, prevention and treatment of cancer.

1980 Renovations to the Allan Blair Memorial Clinic were started beginning with the chemotherapy treatment area.

1981 A Siemens 20 MeV Linear Accelerator was installed at the Allan Blair Memorial Clinic.

Construction of a 28 bed patient lodge in Saskatoon was begun.

1982 The newly renovated Allan Blair Memorial Clinic was officially opened on June 22, 1982.

1983 On April 8, 1983, the first Saskatchewan patient lodge was officially opened in Saskatoon.

1985 On July 12, 1985 the second Saskatchewan patient lodge was officially opened in Regina.

A Siemens 4 MeV Linear Accelerator was installed at the Allan Blair Memorial Clinic.

1986 Construction commenced on the new clinic in Saskatoon.

The Foundation established the "Sylvia Fedoruk Prize in Medical Physics" to honour Sylvia O. Fedoruk on the occasion of her retirement.

The National Cancer Institute (Canada) presented the Terry Fox Regional Development Award jointly to the University of Saskatchewan's College of Medicine and the Saskatchewan Cancer Foundation.

1988 The new Saskatoon Cancer Clinic opened, with official opening ceremonies held on September 19, 1988.

The Saskatchewan Cancer Foundation hosted the Provincial Cancer Agencies Annual Meeting in Saskatoon.